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M1-02-0287

PARSONS ENGINEERING SCIENCE, INC.

1700 Broadway, Suite 900 • Denver, Colorado 80290 • (303) 831-8100 • Fax: (303) 831-8208

Cost?
Base Approval?

per telecon 22 Aug -
base approved work. Estm
Cost estimate by 6 Sep 1996.

August 8, 1996

Captain Ed Marchand
AFCEE/ERT
3207 North Road, Bldg. 532
Brooks AFB, Texas 78235-5363

Subject: Work Plan for Bioventing System Removal and Well Abandonment at
Sites 204.1, 228, and 510.8, Hill Air Force Base (AFB), Utah (Contract
Number F41624-92-8036, Delivery Order 17)

Dear Captain Marchand:

This letter includes a brief work plan for bioventing system removal and the abandonment of vent wells (VWs), groundwater monitoring wells (MWs), and vapor monitoring points (VMPs) at Sites 204.1, 228, and 510.8. The bioventing system at Site 924 has already been removed and is not included in this scope of work.

Parsons ES installed bioventing systems at former underground storage tank (UST) Sites 204.1, 228, and 924 in July 1992, and at Site 510.8 in August 1993. Parsons ES and Hill AFB (Base) requested no-further-action site closure letters for these sites from the Utah Department of Environmental Quality, Division of Environmental Response and Remediation (DERR) in July 1995. DERR has recently agreed that the vadose zone soils at these sites have been sufficiently remediated, and closure letters have been issued by DERR. The remediation effort will be completed with the removal of the bioventing systems and abandonment of VWs, MWs and VMPs at the sites referenced above.

Scope of Work

The general activities to be performed at each site include the following:

Site 204.1

- Disconnect and remove the electrical system associated with the blower unit. This will include removal of electrical components such as the starter and disconnect switch. The overhead wiring will be retained for future use by Hill AFB.
- The regenerative blower and its protective shed will be removed.
- Vent well SB204A-04 will be appropriately abandoned.

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AQ M01-02-0287

- Groundwater monitoring well T-204-1-MW-U-92-HF will be appropriately abandoned.
- Vapor monitoring points SB204A-01, SB204A-02 and SBA204A-03 will be appropriately abandoned.
- The ground surface will be restored.

Site 228

- Disconnect and remove the electrical system associated with the blower unit. This will include removal of electrical components such as the starter and disconnect switch.
- The regenerative blower and its protective shed will be removed.
- Vent well T-228-2-VW-U-92-HF will be appropriately abandoned.
- As requested by Hill AFB, groundwater monitoring well T-228-3-BH-U-HF will be left intact.
- Monitoring point T-228-1-VP-U-92-HF will be appropriately abandoned.
- The ground surface will be restored.

Site 510.8

- Disconnect and remove the electrical system associated with the blower unit. This will include removal of electrical components such as conduit, starter, and disconnect switch. Subsurface conduit will be abandoned in place.
- The regenerative blower and its protective shed will be removed.
- Vent well 510SVE-1 will be appropriately abandoned.
- As requested by Hill AFB, groundwater monitoring well EA-MW1 will be left intact.
- Monitoring points MPA, MPB and MPC will be appropriately abandoned.
- The ground surface will be restored.

The bioventing system removals and VW, MW, and VMP abandonment for all three sites will be accomplished in one field mobilization. The work will be performed by Parsons ES personnel from the Salt Lake City office and qualified local subcontractors to ensure timely completion of the work. A Utah-certified UST consultant will be in responsible charge of the abandonment activities.

Bioventing system removal will involve disconnecting the regenerative blowers from the VW piping and capping the blower outlets to prevent moisture and debris from accumulating in the blower system. The power supply to the blowers will be disconnected and removed by a licensed electrician provided by Parsons ES. The blowers are the property of the Air Force and will be stored at the Base for future bioventing use. Parsons ES will move the blowers to storage or site locations to be designated by the Base.

After the electrician disconnects the power supplies and removes the power switches, any associated wire and conduit connecting the disconnect switches to the site power sources also will be removed. At Site 510.8, buried conduit located between the blower shed and the power source will be abandoned in-place after the wiring is disconnected.

The VWs and MWs will be abandoned following the Utah Department of Natural Resources, Division of Water Rights (DWR) well abandonment procedures outlined in the State of Utah Administrative Rules for Water Well Drillers, 1995 (R655-4-11.4 and R655-4-12.1 through R655-4-12.12). The abandonment procedures require filling the well casings with bentonite grout or a bentonite-based well seal using a grout pipe. Each casing will be excavated and cut off at a depth of 2 feet below ground surface (bgs). The excavated area then will be backfilled with native material or roadbase. The backfill will be compacted to the specifications approved by the Base Civil Engineer, and the area will be restored with appropriate hard-surface material.

In order to cut the VW and MW casings at 2 feet bgs, it will be necessary to excavate an area around each casing large enough to chip out the existing grout annular seal. A Utah-licensed well driller will perform the abandonment of all wells and points, and will file a report of abandonment for groundwater monitoring wells with the DWR. Boreholes have previously been advanced at these locations; therefore it is assumed that no underground utilities are present. However, digging clearances will be requested from Base Red Stakes Services. Construction debris will be disposed of at an offsite public landfill.

The VMPs will be excavated to 2 feet below ground surface as described above for wells. The VMP tubing will be cut off at the bottom of the excavation, and a 0.25" polyvinyl chloride cap will be glued to the top of the casing to be left in place. The excavation will be backfilled with native material or roadbase, and compacted to the specifications approved by the Base Civil Engineer. The area will then be restored with the appropriate hard-surface material.

Parsons ES proposes to perform VW, MP and VMP abandonment in the same field mobilization used for Option 2 closure soil sampling at Site 4301 (projected to occur in October 1996), as described in the Draft Closure Sampling and Analysis Plan for UST Site 4301.0 (EDHL), Little Mountain Test Annex, Hill AFB, Utah. Bioventing system removal could be performed at an earlier date.

Captain Ed Marchand
August 8, 1996
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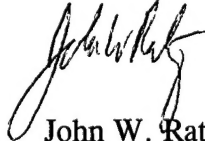
Please call Mr. Gene Wright, the Parsons ES Site Manager at (801) 572-5999 or Mr. John Ratz, the Parsons ES Project Manager, at (303) 831-8100 if you have any questions regarding this scope of work. It has been a pleasure working on this successful project with Hill AFB Environmental Management and AFCEE.

Sincerely,

PARSONS ENGINEERING SCIENCE, INC.

JWR for Gene Wright

Gene A. Wright, P.G.
Certified UST Consultant (CC0020)



John W. Ratz, P.E.
Project Manager

cc: File 726876.0921.C